AMENDMENTS TO THE ABSTRACT:

Please amend the Abstract as follows:

ABSTRACT OF THE DISCLOSURE

An optical regenerator suitable for use with optical signals has two stages. An incoming optical signal to be regenerated passes first through a data division stage. This divides the optical data stream into a number of data streams at a bit rate lower than the original optical signal. These data streams then pass to a regeneration stage. In the regeneration stage, there are a number of optical gates. Each gate receives one of the optical data streams at its control input. An optical clock stream at the lower or at a multiple thereof passes through the optical gates. The outputs of these optical gates are connected in common to the optical output of the regenerator and provide a bit-interleaved regenerated optical data stream at the output.